



# Best Available Copy

## ***IN THE UNITED STATES PATENT AND TRADEMARK OFFICE***

In re application of: Aronowitz et al.

Attorney Docket No.:

02-6037/LSI1P218

Application No.: Not yet assigned

Examiner: Not yet assigned

Filed: Herewith

Group: Not yet assigned

Title: MEMORY DEVICE HAVING AN  
ELECTRON TRAPPING LAYER IN A HIGH-K  
DIELECTRIC GATE STACK

### **DECLARATION OF FACTS IN SUPPORT OF APPLYING ON BEHALF OF OMITTED INVENTORS**

**Pursuant to 37 C.F.R. §1.47 (a)**

Mail Stop Patent Application  
Commissioner of Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

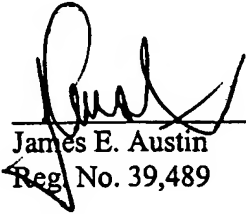
This declaration is made as to the facts that are relied upon to establish the diligent effort made to secure the execution of the Declaration for the above-identified patent application by the omitted inventor, Sheldon Aronowitz. This declaration is being made by an available person having first-hand knowledge of the facts recited therein.

I, James E. Austin, do hereby declare:

1. I am a patent attorney responsible for the preparation of the above referenced application. The application names three inventors, Sheldon Aronowitz, Vladimir Zubkov, and Grace S. Sun, all of whom were employed by LSI Logic Corporation ("LSI") at the time the invention of the subject application was made. During the course of the preparation of the subject application, the employment of Sheldon Aronowitz with LSI terminated.
2. During substantially the same period, our law firm, Beyer Weaver & Thomas, LLP, was engaged in the preparation of three other patent applications for LSI on which Mr. Aronowitz was named as a co-inventor.

3. On May 9, 2003, my assistant, Tara Hayden, sent letters to Mr. Aronowitz, relating to two of these three other applications, enclosing for each a copy of the completed application, a Declaration and Power of Attorney for Original U.S. Patent Application ("Declaration"), and an Assignment of Patent Application ("Assignment"), and requesting that the inventor sign the Declaration and Assignment for filing with the application in the U.S. Patent Office. A copy of one of Ms. Hayden's May 9, 2003 letters to the non-signing inventor, Mr. Aronowitz, is attached as Exhibit A, hereto.
4. On May 20, 2003, Ms. Hayden received a letter from Mr. Aronowitz in response to her letters of May 9, 2003. In his letter, Mr. Aronowitz indicated that he was returning the subject patent applications unread and unsigned and that he would only sign the Declaration and Assignment documents for the applications if a satisfactory arrangement could be reached between himself and LSI, his former employer.
5. On May 20, 2003, I forwarded a copy of Mr. Aronowitz's letter of May 19, 2003 to the LSI patent attorney responsible for these applications and the subject application, Timothy Croll, and notified Mr. Croll in a telephone conversation of Mr. Aronowitz's position. Mr. Croll indicated to me that LSI would attempt to reach a satisfactory arrangement with Mr. Aronowitz for execution of the Declaration and Assignment documents for all four of the applications involved.
6. From that time until the present I am informed by Mr. Croll that negotiations between LSI and Mr. Aronowitz have failed to achieve a satisfactory arrangement. Accordingly, Mr. Aronowitz has refused to sign the Declaration and Assignment documents for the subject application.
7. Mr. Aronowitz has assigned to LSI his interest in the invention described and claimed in the subject application pursuant to his employment agreement (Employee Invention and Confidential Information Agreement) dated February 16, 1993, a copy of which is attached hereto as Exhibit C.
8. Filing of the present application in a timely fashion is necessary to preserve the rights of the applicant, since a delay in filing could result in the application of intervening art against the application. Therefore, any further delay in filing the present application represents a risk to applicant's patent rights. Accordingly, the accompanying Petition for Application by Other Than All the Inventors is being filed together with the subject application in order to preserve the patent rights.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.



James E. Austin  
Reg. No. 39,489

October 31, 2003  
Date



# BEYER WEAVER & THOMAS, LLP

## INTELLECTUAL PROPERTY LAW

2030 Addison Street, Seventh Floor, Berkeley, CA 94704  
Telephone: (510) 843-6200 Facsimile: (510) 843-6203  
www.beyerlaw.com

May 9, 2003

Sheldon Aronowitz  
3577 Barley Court  
San Jose, California 95127

Re: U.S. Patent Application entitled, "*Vaporization and Ionization of Metals for Use in Semiconductor Processing*"

Inventors: Kimball, et al.

Your File No.: 03-0569

Our File No.: LSI1P223

Dear Mr. Aronowitz:

Thank you for your comments concerning the above-referenced patent application. We have now revised the application in accordance with your comments.

At this time it is necessary to sign the enclosed standard forms. One form is a Declaration and Power of Attorney form, and the other form is an assignment of rights to LSI Logic. After your final read through of the patent application (assuming no additional changes are needed), please read and then sign and date each of the enclosed forms by your name.

A disk containing the revised patent application will be mailed to the IP Law Department of LSI Logic.

Should you have any questions, please don't hesitate to contact us. Please note that by law this application (as filed) will be published in the U.S. at 18 months from the earliest priority date. If the application will not be filed internationally, you may choose to request nonpublication, but this request must be made upon filing the application. You also have options of early publication and republication, but as these issues are complex, please telephone us should you have any questions on any aspect of publication.

Finally, we would again like to remind you of our duty to disclose the most pertinent prior art of which you are aware to the Patent and Trademark Office. If you can think of any pertinent references or patents, or any similar existing technology, please let us know. The duty to disclose prior art continues until the patent actually issues; if you become aware of other prior art in the future, please let us know.

Very truly yours,

BEYER WEAVER & THOMAS, LLP

Tara Hayden, Patent Secretary for

James E. Austin

Enclosures

SILICON VALLEY OFFICE • 590 W. El Camino Real • Mountain View • CA • 94040 • Telephone: (650) 961-8300 • Facsimile: (650) 961-8301  
MONTEREY OFFICE • 380 Foam Street, Suite 210 • Monterey • CA • 93940 • Telephone: (831) 655-2300 • Facsimile: (831) 655-4288



3577 Barley Court  
San Jose, CA 95127-4401

May 19, 2003

Tara Hayden  
Patent Secretary for James E. Austin  
Beyer Weaver & Thomas  
2030 Addison St.  
Suite 700  
Berkeley, CA 94704-1144

Dear Tara Hayden:

Re: Your letters dated May 9, 2003 and the U.S. Patent Applications LSI1P212 & LSI1P223

I am returning the two U.S. patent applications, *Vaporization and Handling of Metals for Use in Semiconductor Processing* by James Kimball and Sheldon Aronowitz and *Vaporization and Ionization of Metals for Use in Semiconductor Processing* by James Kimball and Sheldon Aronowitz, unread and unsigned.

I am no longer employed by LSI Logic. If a satisfactory consultative arrangement between LSI Logic and myself can be established, I would be happy to analyze, critic, and subsequently sign the documents.

Sincerely,

Sheldon Aronowitz

Encl.: U.S. Patent Applications LSI1P212 & LSI1P223 and two cover letters from Tara Hayden



## **EMPLOYEE INVENTION AND CONFIDENTIAL INFORMATION AGREEMENT**

In consideration and as a condition of my employment, or continued employment, by LSI LOGIC CORPORATION (hereinafter the "Company") and the compensation paid therefor:

1. **Confidentiality.** Except as otherwise provided herein, I agree to keep confidential and not to disclose, or make any use of, except for the benefit of the Company, either during or subsequent to my employment, any inventions, trade secrets, proprietary or confidential information, work of authorship or proprietary thing that relates to the actual or demonstrably anticipated business, research, development, product, devices or activity of the Company or any of its clients, customers, consultants, licensees or affiliates (hereinafter "Others"), which I may produce, obtain or otherwise acquire during the course of my employment. For the purposes of this Agreement all of the foregoing items which I am bound to maintain confidential, or with respect to which I have a duty or obligation shall be referred to in this Agreement, individually and collectively as "Proprietary Information".

2. **Conflicting Employment; Return of Confidential Material.** I agree that, without the prior written consent of the Company, during my employment with the Company I will not engage in any other employment, occupation, consulting or other activity relating to the actual or demonstrably anticipated business of the Company or which would otherwise conflict with my obligations to the Company. If my employment with the Company terminates for any reason I agree to promptly surrender and deliver to the Company all records, drawings, documents and data pertaining to any Proprietary Information as well as tangible property related thereto which I then have in my custody or control. Further, I will

not take with me any document, disk or other thing containing or pertaining to any Proprietary Information which I may produce or obtain during the course of my employment with the Company.

3. Assignment of Inventions. I hereby assign and transfer to the Company my entire right, title and interest in all Proprietary Information, conceived solely by me or jointly with Others during the period of my employment with the Company. This Agreement does not require assignment of any invention excluded from any assignment by Section 2870 of the California Labor Code (hereinafter "Section 2870").

4. Disclosure of Inventions. I agree that in connection with any invention, trade secret, work of authorship, proprietary information or proprietary thing:

(a) I will disclose all Proprietary Information upon conception or creation in writing to my immediate supervisor, with a copy to the Company's Patent Counsel, regardless of whether I believe the invention is protected by Section 2870, in order to permit the Company to claim rights to which it may be entitled under this Agreement. Such disclosure shall be received in confidence by the Company;

(b) Upon the Company's request, I will promptly execute a written assignment to the Company of all right, title, and interest to any Proprietary Information and I will preserve the aforementioned as confidential information of the Company;

(c) Upon the Company's request and at its expense, I agree to assist the Company (or its nominee) during and at any time subsequent to my employment in every reasonable way to obtain for its own benefit patents, copyrights, mask work rights or other proprietary interest or protections for such assignable Proprietary Information in any and all countries, which Proprietary Information shall be and remain the sole and exclusive property of the Company (or its nominee) regardless of whether patented, copyrighted, registered or otherwise protected; and

(d) I specifically acknowledge that any computer program, any programming documentation and any semiconductor chip products or mask works fall within the scope of this Agreement and that the Company owns all rights comprised in the registration or copyrights of such work.

5. Execution of Documents. In connection with paragraph 4, upon the Company's (or its nominee's) request and at its expense, I agree to execute, acknowledge and deliver to the Company (or its nominee) all such documents, including without limitation applications for patents, registrations, assignments of inventions and patents, assignments of copyrights and/or mask works to be issued or registered therefor, which the Company deems necessary or desirable to protect or register its interest in the Proprietary Information in any and all countries or to otherwise vest title thereto in the Company (or its nominee).

6. Prior Inventions. It is understood that all inventions, if any, patented or unpatented, which I made prior to my employment by the Company, are excluded from the scope of this Agreement. To preclude any uncertainty, I have set forth below a complete list of all of my prior inventions, including numbers of all patents and patent applications and a brief description of all unpatented inventions which are not the property of a previous employer. I represent and covenant that the list is complete and that if no items are on the list, I have no such prior inventions. I hereby certify that I have no continuing obligations with respect to assignment of inventions to any previous employer. I understand that any improvements, whether subject to patent, copyright or other protection, made on the listed inventions after the commencement of my employment by the Company are assigned or are to be assigned to the Company to the extent that such improvements are covered by the provisions of paragraph 3 of this Agreement.

7. Other Obligations. I acknowledge that the Company, from time to time, may have agreements with other persons or with the U.S. Government, or agencies thereof, which impose obligations or restrictions on the Company regarding Proprietary Information made in the course of that work or regarding the confidential nature of such work. I agree to be



bound by all such obligations and restrictions and to take all action necessary to discharge the obligations of the Company thereunder.

8. Trade Secrets, Property Rights and Confidential Information of Others. I represent that my performance of all the terms of this Agreement and as an employee of the Company does not and will not breach any Agreement made prior to my employment with the Company to keep in confidence or in trust any confidential or Proprietary Information or material including any invention, trade secret or work of authorship belonging to any previous employer of mine or any other person. I agree not to enter into any agreement either written or oral in conflict herewith. I will not disclose to the Company, nor induce the Company to receive or use, any confidential information, trade secret, work of authorship, proprietary information or proprietary thing belonging to, or designated as confidential by any previous employer of mine or by any other person.

9. Solicitation. I will not during my employment or within one year after it ends, without the express written consent of the Company, directly or indirectly: (a) induce any employee to terminate or alter his or her relationship with the Company, or (b) directly solicit any employee of the Company, to leave employment with the Company.

10. Terms of Employment. I understand and agree that I am not being employed by the Company for any specified period of time and that either I or the Company may terminate my employment with the Company at any time for any reason, with or without cause.

11. Modification. This Agreement may not be amended, in whole or in part, except by a written instrument signed by both parties hereto.

12. Entire Agreement. I acknowledge receipt of this Agreement, and agree that with respect to the subject matter hereof it is my entire agreement with the Company, superseding any previous oral or written understandings or agreements with the Company or any officer or representative thereof.

13. Severability. If any provision of this Agreement shall be held to be illegal or unenforceable, such provision shall be modified so as to be legal and enforceable in a manner that is as consistent with the original intent as possible, or if such is not be possible it shall be severed from this Agreement shall not fail on account thereof, but shall otherwise remain in full force and effect.

14. Successors and Assigns. This Agreement shall be binding upon my heirs, executors, administrators or other legal representatives and is for the benefit of the Company, its subsidiaries and successors in interest or assigns.

15. Export Regulations Compliance. I acknowledge and understand that any technical data subject to the U.S. export regulations or related to defense articles on the U.S. Munitions List, to which I have access or which is disclosed to me in the course of employment by the Company is subject to export control under either the Department of Commerce or the International Traffic in Arms Regulations (Title 22, Code of Federal Regulations, Parts 120-130). I hereby certify that such data will not be further disclosed, exported, or transferred in any manner to any foreign country without prior written approval of either the Department of Commerce or the Office of Munitions Control, U.S. Department of State as applicable.

16. Governing Law. This Agreement shall be governed by the laws of the State of California.

LSI LOGIC CORPORATION

By: Cari Lampe  
Name: Cari Lampe  
Title: HR Asst  
2/16/93  
Date

SHELDON ARONOWITZ  
Employee - Print Name  
[Signature]  
Employee - Signature  
2/16/93  
Date

**ASSIGNMENT RECORDATION COVER SHEET  
-PATENTS ONLY-**

To: Honorable Commissioner of Patents and Trademarks:

Please record the attached original document(s) or copy thereof.

1. Name of conveying party(ies)  
a) **Sheldon Aronowitz**

2. Name and address of receiving party(ies):  
a) Name: **LSI Logic Corporation**  
Address: **1551 McCarthy Boulevard**  
**Milpitas, California 95035**

3. Nature of conveyance  
☒ Assignment ☐ Merger  
☐ Security Agreement ☐ Change of Name  
☐ Other \_\_\_\_\_ ☐ License Agreement

Execution Date: **February 16, 1993**

4. Application Number(s) or Patent Number(s): **Filed Herewith**

The title of the (new) application is:

**MEMORY DEVICE HAVING AN ELECTRON TRAPPING LAYER IN A HIGH-K DIELECTRIC  
GATE STACK**

5. Please send all correspondence concerning this (these) documents to:

**Customer Number: 24319**

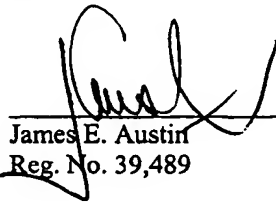
6. Total number of applications and patents involved: **1**

7. Total fee (37 CFR 3.41): **\$40.00**

☐ Enclosed  
☒ Any additional fees are authorized to be charged to Deposit Account No. 12-2252  
(Order No. 02-6037)

8. To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

Date: **October 31, 2003**

  
\_\_\_\_\_  
James E. Austin  
Reg. No. 39,489

## **EMPLOYEE INVENTION AND CONFIDENTIAL INFORMATION AGREEMENT**

In consideration and as a condition of my employment, or continued employment, by **LSI LOGIC CORPORATION** (hereinafter the "Company") and the compensation paid therefor:

1. **Confidentiality.** Except as otherwise provided herein, I agree to keep confidential and not to disclose, or make any use of, except for the benefit of the Company, either during or subsequent to my employment, any inventions, trade secrets, proprietary or confidential information, work of authorship or proprietary thing that relates to the actual or demonstrably anticipated business, research, development, product, devices or activity of the Company or any of its clients, customers, consultants, licensees or affiliates (hereinafter "Others"), which I may produce, obtain or otherwise acquire during the course of my employment. For the purposes of this Agreement all of the foregoing items which I am bound to maintain confidential, or with respect to which I have a duty or obligation shall be referred to in this Agreement, individually and collectively as "Proprietary Information".

2. **Conflicting Employment: Return of Confidential Material.** I agree that, without the prior written consent of the Company, during my employment with the Company I will not engage in any other employment, occupation, consulting or other activity relating to the actual or demonstrably anticipated business of the Company or which would otherwise conflict with my obligations to the Company. If my employment with the Company terminates for any reason I agree to promptly surrender and deliver to the Company all records, drawings, documents and data pertaining to any Proprietary Information as well as tangible property related thereto which I then have in my custody or control. Further, I will

not take with me any document, disk or other thing containing or pertaining to any Proprietary Information which I may produce or obtain during the course of my employment with the Company.

3. Assignment of Inventions. I hereby assign and transfer to the Company my entire right, title and interest in all Proprietary Information, conceived solely by me or jointly with Others during the period of my employment with the Company. This Agreement does not require assignment of any invention excluded from any assignment by Section 2870 of the California Labor Code (hereinafter "Section 2870").

4. Disclosure of Inventions. I agree that in connection with any invention, trade secret, work of authorship, proprietary information or proprietary thing:

(a) I will disclose all Proprietary Information upon conception or creation in writing to my immediate supervisor, with a copy to the Company's Patent Counsel, regardless of whether I believe the invention is protected by Section 2870, in order to permit the Company to claim rights to which it may be entitled under this Agreement. Such disclosure shall be received in confidence by the Company;

(b) Upon the Company's request, I will promptly execute a written assignment to the Company of all right, title, and interest to any Proprietary Information and I will preserve the aforementioned as confidential information of the Company;

(c) Upon the Company's request and at its expense, I agree to assist the Company (or its nominee) during and at any time subsequent to my employment in every reasonable way to obtain for its own benefit patents, copyrights, mask work rights or other proprietary interest or protections for such assignable Proprietary Information in any and all countries, which Proprietary Information shall be and remain the sole and exclusive property of the Company (or its nominee) regardless of whether patented, copyrighted, registered or otherwise protected; and

(d) I specifically acknowledge that any computer program, any programming documentation and any semiconductor chip products or mask works fall within the scope of this Agreement and that the Company owns all rights comprised in the registration or copyrights of such work.

5. Execution of Documents. In connection with paragraph 4, upon the Company's (or its nominee's) request and at its expense, I agree to execute, acknowledge and deliver to the Company (or its nominee) all such documents, including without limitation applications for patents, registrations, assignments of inventions and patents, assignments of copyrights and/or mask works to be issued or registered therefor, which the Company deems necessary or desirable to protect or register its interest in the Proprietary Information in any and all countries or to otherwise vest title thereto in the Company (or its nominee).

6. Prior Inventions. It is understood that all inventions, if any, patented or unpatented, which I made prior to my employment by the Company, are excluded from the scope of this Agreement. To preclude any uncertainty, I have set forth below a complete list of all of my prior inventions, including numbers of all patents and patent applications and a brief description of all unpatented inventions which are not the property of a previous employer. I represent and covenant that the list is complete and that if no items are on the list, I have no such prior inventions. I hereby certify that I have no continuing obligations with respect to assignment of inventions to any previous employer. I understand that any improvements, whether subject to patent, copyright or other protection, made on the listed inventions after the commencement of my employment by the Company are assigned or are to be assigned to the Company to the extent that such improvements are covered by the provisions of paragraph 3 of this Agreement.

7. Other Obligations. I acknowledge that the Company, from time to time, may have agreements with other persons or with the U.S. Government, or agencies thereof, which impose obligations or restrictions on the Company regarding Proprietary Information made in the course of that work or regarding the confidential nature of such work. I agree to be

bound by all such obligations and restrictions and to take all action necessary to discharge the obligations of the Company thereunder.

8. Trade Secrets, Property Rights and Confidential Information of Others. I represent that my performance of all the terms of this Agreement and as an employee of the Company does not and will not breach any Agreement made prior to my employment with the Company to keep in confidence or in trust any confidential or Proprietary Information or material including any invention, trade secret or work of authorship belonging to any previous employer of mine or any other person. I agree not to enter into any agreement either written or oral in conflict herewith. I will not disclose to the Company, nor induce the Company to receive or use, any confidential information, trade secret, work of authorship, proprietary information or proprietary thing belonging to, or designated as confidential by any previous employer of mine or by any other person.

9. Solicitation. I will not during my employment or within one year after it ends, without the express written consent of the Company, directly or indirectly: (a) induce any employee to terminate or alter his or her relationship with the Company, or (b) directly solicit any employee of the Company, to leave employment with the Company.

10. Terms of Employment. I understand and agree that I am not being employed by the Company for any specified period of time and that either I or the Company may terminate my employment with the Company at any time for any reason, with or without cause.

11. Modification. This Agreement may not be amended, in whole or in part, except by a written instrument signed by both parties hereto.

12. Entire Agreement. I acknowledge receipt of this Agreement, and agree that with respect to the subject matter hereof it is my entire agreement with the Company, superseding any previous oral or written understandings or agreements with the Company or any officer or representative thereof.

13. Severability. If any provision of this Agreement shall be held to be illegal or unenforceable, such provision shall be modified so as to be legal and enforceable in a manner that is as consistent with the original intent as possible, or if such is not possible it shall be severed from this Agreement shall not fail on account thereof, but shall otherwise remain in full force and effect.

14. Successors and Assigns. This Agreement shall be binding upon my heirs, executors, administrators or other legal representatives and is for the benefit of the Company, its subsidiaries and successors in interest or assigns.

15. Export Regulations Compliance. I acknowledge and understand that any technical data subject to the U.S. export regulations or related to defense articles on the U.S. Munitions List, to which I have access or which is disclosed to me in the course of employment by the Company is subject to export control under either the Department of Commerce or the International Traffic in Arms Regulations (Title 22, Code of Federal Regulations, Parts 120-130). I hereby certify that such data will not be further disclosed, exported, or transferred in any manner to any foreign country without prior written approval of either the Department of Commerce or the Office of Munitions Control, U.S. Department of State as applicable.

16. Governing Law. This Agreement shall be governed by the laws of the State of California.

LSI LOGIC CORPORATION

By: Cari Lampe  
Name: Cari Lampe  
Title: HR Asst  
2/16/93  
Date

SHELDON ARONOWITZ  
Employee - Print Name  
[Signature]  
Employee - Signature  
2/16/93  
Date



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